

ART. I.—*Contributions to the Flora of Australia, No. 32.**
Additions to the Flora of the Northern Territory.

By A. J. EWART, D.Sc., Ph.D., F.L.S., F.R.S., and
LESLEY R. KERR, M.Sc.

[Read 11th March, 1926.]

GRAMINEAE.

Ectrosia agrostoides Benth.

Batchelor, N.T., and near Darwin, N.T., 26/7/11, No. 104, G. F. Hill. This was recorded as *Triraphis mollis*, in the Northern Territory Flora. It is probably often confused with this species or with *Ectrosia leporina*, and is probably more widely distributed than would appear from the records.

Ectrosia spadicea R.Br.

Thring Swamp, Wycliffe, N.T., June, 1924; from the Herbert River to Carpentaria, 1886, Lieut. Dittrich; Gilbert River, Queensland, Armit, No. 902.

This is closer to *E. agrostoides* than to *E. leporina*.

EUPHORBIACEAE.

EUPHORBIA PETALA, n. sp.

Wycliffe Well, June, 1924, A.J.E.

A small prostrate herb with a central deeply descending tap root and slender spreading branches a few inches in length; leaves on very short stalks, mostly opposite, with an oblique base and broadly oblong; flowers crowded at the ends of the branches, axillary or terminal, with prominent pink appendages resembling petals; glands prominent, appendages of the involucre with a fringed border, the stalk of the ovary projecting well beyond the "flower," sterile hairs between the stamens (male flowers), the stalk of each stamen prominently jointed near the tip, seeds smooth, style very short, not deeply bifid.

The plant shows affinities to *E. filipes*, *E. myrtoides*, *E. Drummondii* and *E. alsiniflora*. *E. filipes* is a much taller, diffusely erect plant, and has a much longer and more deeply bifid stigma. *E. myrtoides* has an erect habit, larger leaves, and only very small petal-like appendages. *E. petala* differs from *E. Drummondii* in having smooth, not rugose, seeds, and in having petal-like appendages as in *E. alsiniflora*. It has, however, the habit of *E. Drummondii*, and differs from *E. alsiniflora* in having smaller glands, and the petal-like appendages relatively much larger.

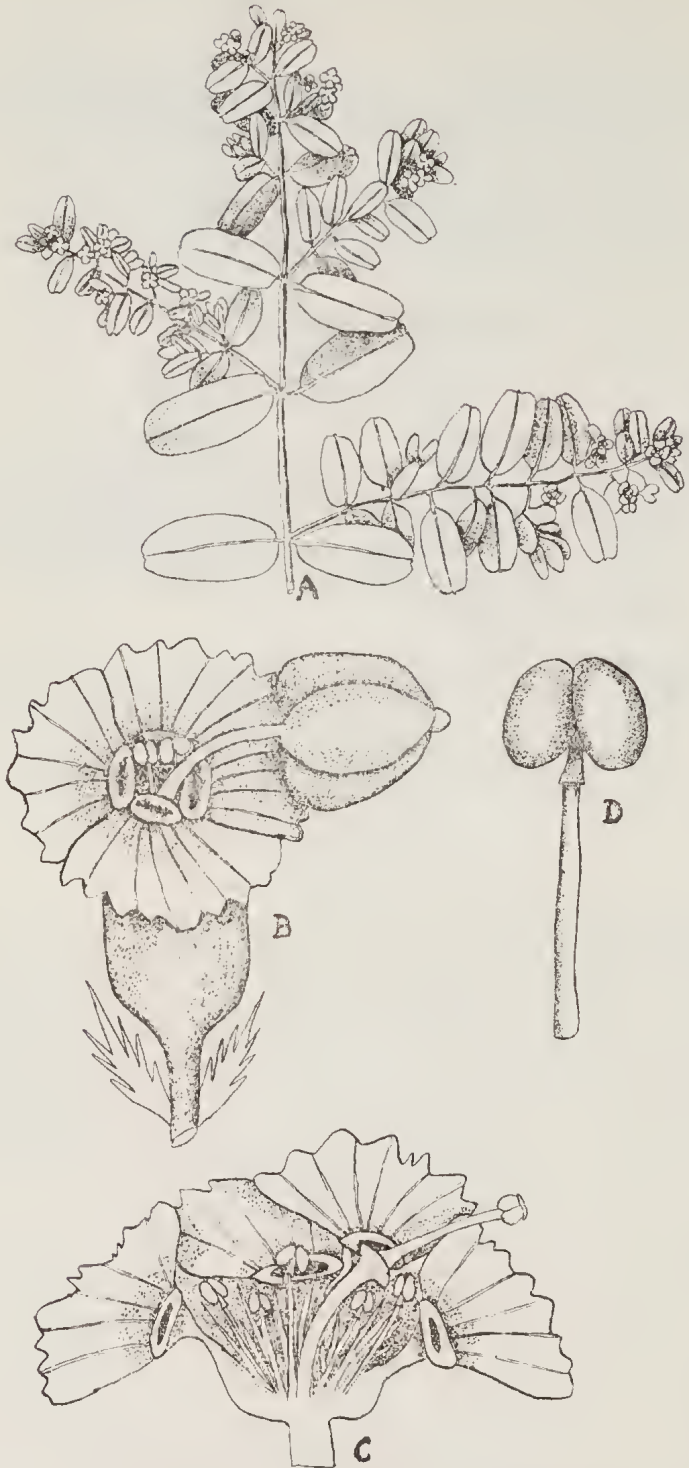


Fig. 1—*Euphorbia petala*, n. sp.

A, Portion of flowering shoot; B, single inflorescence enlarged, showing the petaloid rays to the involucreal glands; C, the same in vertical section, showing the male flowers with their appendages and the stalked central female flower; D, single male flower.

PAPILIONACEAE.

INDIGOFERA UNCINATA, n. sp.

A slender attenuated shrub of almost tree-like habit and 6 to 8 feet in height; leaflets paler beneath, covered with small whitish appressed hairs, usually seven leaflets, lanceolate or elliptical; stipules forming small pointed thorns; flowers axillary, clustered at the ends of the racemes, buds with a rusty tomentum. The racemes open out in fruit; corolla dark purplish red and caducous, usually only one flower showing at a time in each raceme, pod linear an inch or rather more in length, thick with the dorsal and ventral sutures prominent, the surface hairy and with pithy partitions between the rather large seeds. The hairs rub off the ripe pods readily.

This plant appears to be the same as that placed by Bentham as *Indigofera brevidens* var. *uncinata*. There is also a variety *uncinata* of *I. australis* in the Tate Herbarium (Wirrabirie, R. Brown, Oct., 1882), which has curved thorny stipules, but has the more numerous leaflets and flowers of *I. australis*. The flowers of *I. australis* are purple to pale fuchsia in colour, whereas this plant has more darkly red flowers. It is intermediate between *I. australis* and *I. brevidens*, but is less whitish hoary than the latter, has the characteristic thorny stipules, has smaller flowers than both species, is taller than either, with a woody stem, and is almost like a small attenuated tree 6 to 8 feet high.

Forrest expedition, 1874 (without locality); towards Alice Springs, Flint, 1882; Gawler Ranges, R. F. Sullivan; Camp 17, S. Australia, R. Helms (Elder expl. exped.), 1891; Tarella, W. Bauerlen, No. 116, 1887; Cobar, N.S.W., J. M. Curran, 1887; Mt. Watson, near Birkgate River, R. Helms; Taylor Range, N.T., A. J. E., June, 1924. One doubtful specimen without locality (ex. Herb. Melb., Dr. Mueller, Jan., 1853), which was seen by Bentham, has the thorny stipules less developed, but has the smaller flowers and taller shrubby habit of *I. uncinata*. The légumes are, however, shorter and glabrous.

INDIGOFERA UNCINATA, n. sp., var. MINOR.

Hastings River, Dr. Beckler; Barrier Range, Dr. Beckler, 1861; Gascoyne River, W.A., J. Forrest, 1882.

This plant was placed under *I. australis*, as variety *minor* by Bentham. It represents a further divergence from the *australis* type. The hairiness of the leaves is more prominent, the leaflets are five in number and smaller, the stipules are spiny but smaller, the whole plant is very woody, and the stem notched.



Fig. 2—*Indigofera uncinata*, n. sp.

PTYCHOSEMA TRIFOLIATUM F.V.M.

This interesting plant, whose yellow flowers and trifoliate leaves at a distance give it the appearance of a creeping *Lotus*, was described from imperfect non-fruiting material by Mueller in Wing's *Southern Science Record*, 1882, ii., p. 72. It is already recorded from Central Australia, but as abundant material was obtained in the bed of the Hansen River, near Central Mt. Stuart, by the senior author in 1924, a full description and figure of the plant is given.

A slender attenuated herb with a deeply descending tap root and slender prostrate spreading branches one to two feet in length, and trifoliate leaves on long, slender leaf stalks, the leaflets small, bi-lobed and obovate, glabrous and non-glandular. Stipules lanceolate, small but prominent. Flowers solitary, on long stalks, leaf opposed. Sepals five, the three anterior sepals united half-way up, the tube campanulate, the lobes bluntly pointed, the two posterior sepals united nearly to their tips.

Standard yellow, with a spot at the throat of the flower, about as broad as long, with two rounded lobes narrowing to a stalk, the whole about as long as the carina. Alae yellow, on slender stalks, small, narrow, somewhat spathulate, and about half the length of the carina. Carina a paler greenish yellow, with small purplish spots or veins outside (as also on the outside of the vexillum), the petals united near the tip by their ventral edges and with free projecting terminal lobes. Stamens ten, all loosely united nearly half way up, the sheath split posteriorly, and persisting at the base of the pod. Anthers versatile, two celled, oblong. Style long, slender, tapering and glabrous. Stigma very small, but terminal and capitate. Ovary prominently stalked, ten to twelve ovules. Fruit flat, about 20 mm. long by 4 mm. broad, the valves pale and thin, with usually 6 to 8 rounded-oblong seeds on long laterally inserted stalks, radicle short but bent.

The genus *Ptychosema* was based by Bentham upon a non-fruiting specimen of *P. pusillum*, from W. Australia, and this is the only species described in Bentham's Flora. Since then Mueller described two additional species, *P. anomalum* and *P. trifoliatum*, the first species having pinnate foliage, the last-named trifoliate. The two first species appear to be very rare, whereas *P. trifoliatum* extends in various localities from the Northern Territory to W. Australia, mostly in sandy flats near soaks, or in river beds. The ovary is not sessile, but stalked; the carinal petals are only partially united, all the petals have prominent stalks, the anthers are versatile, and the radicle is short but curved. *Lamprolobium* is closely allied, but has a short but quite straight radicle. Bentham placed both genera in the Galegae next to *Tephrosia*, mainly on account of their pinnate foliage, and Engler's *Pflanzenfamilien* adopts the same systematic position. *P. trifoliatum* has, however, the foliage of the

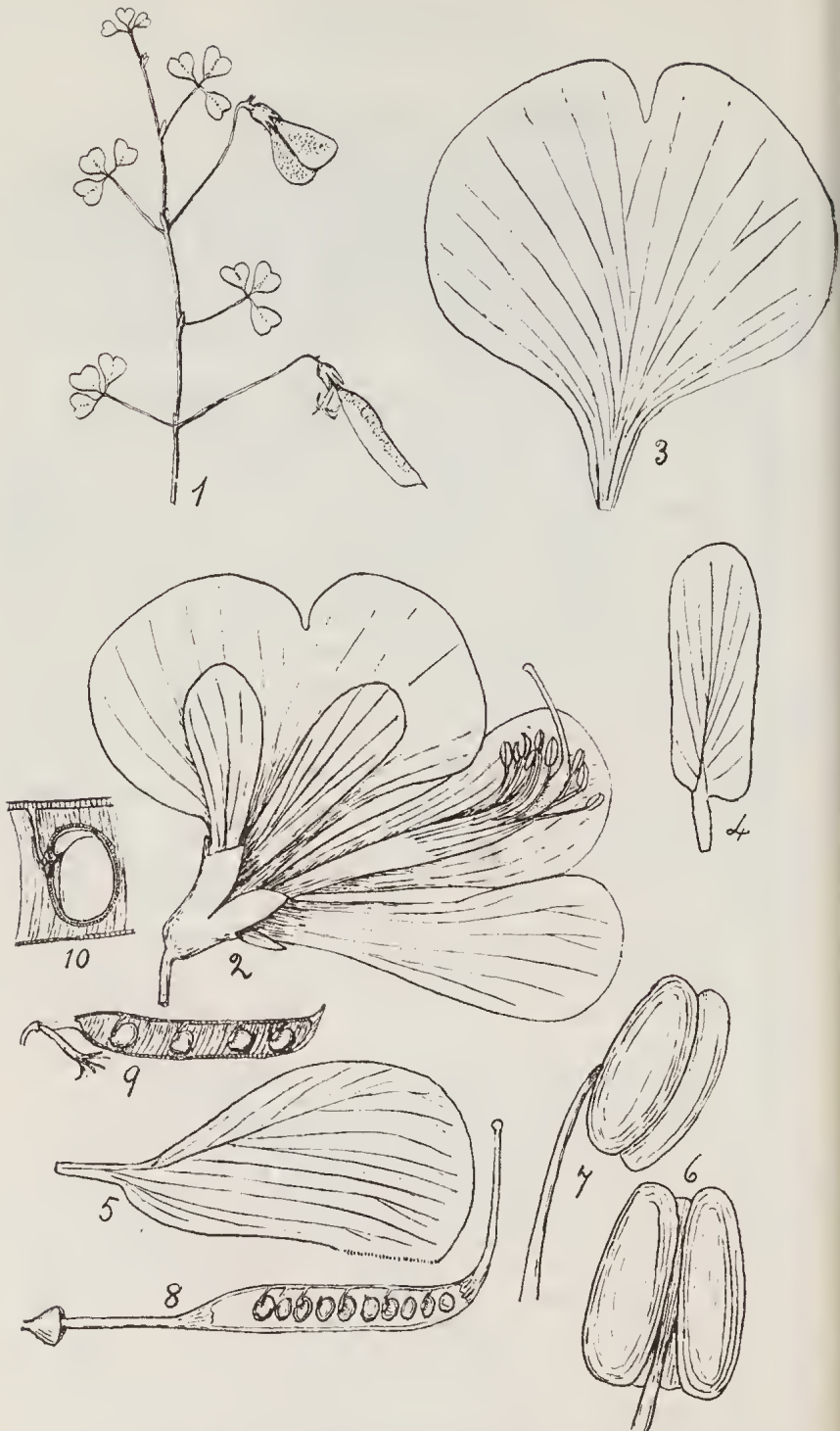


Fig. 3—*Ptychosema trifoliatum*, F. v. M.

1, Tip of a branch, with flowers, fruit and leaves; 2, flower, with the carina pulled down and opened out; 3, standard; 4, ala; 5, carinal petal; 6, stamen from the back; and 7, from the side; 8, young ovary enlarged and side removed; 9, fruit $1\frac{1}{2}$ times natural size, one valve removed; 10, portion of valve with a single seed, half of the seed coat removed.

Genistae, and the split staminal sheath and general structure of the flower in all the species undoubtedly justifies the transference of both genera from the Galegae to the Genistae, placing them between *Rothia* and *Goodia*.

MYRTACEAE.

EUCALYPTUS GILLENI, n. sp.

Mt. Gillen, N.T., July, 1924, A.J.E.

A low, densely-branched shrub, spreading from the base, about 6 to 8 feet high, with a smooth bark on the branches, becoming rougher and more box-like on the older stems, but not fibrous. Leaves shortly stalked with the petiole usually twisted so as to place the lamina vertical, linear-ovate to lanceolate, bluntly pointed, thick, very coriaceous, pale green on both sides, intramarginal vein prominently developed, and frequently with a second fainter intramarginal vein nearer the edge of the leaf; lateral veins diverging at an angle of about 45° ; young shoots angular, mid-rib red. Fruits shortly stalked, usually in clusters of three, occasionally in twos, or even single, and either on terminal leafless branches or on leafy shoots opposite the leaves or in their axils, peduncles short, thick and more or less angular; capsules sessile almost globular, with an equatorial rim and a dome-shaped top with four, or less commonly three, short valves with flattened incurved tips; seeds not winged.

The fruit somewhat resembles that of *E. macrorrhyncha*, but the bark is quite different. The nearest affinity appears to be *E. Oldfieldii*, but the general habit and the short angular common pedicel are distinctive features. Although the flowers have not been seen, the species appears to be quite distinct.

Juvenile leaves narrow, ovate lanceolate, pointed, shortly stalked, opposite and becoming alternate later; venation almost identical with the adult leaves, except that the intramarginal vein is thinner and single and the leaves less coriaceous than the adult; oil glands not numerous, but more prominent on the juvenile foliage. The plant is strongly xerophytic, and only grows so far as is known on the southern slope of Mt. Gillen, among tufts of porcupine grass. It grows well in Melbourne, forming a rather graceful small shrub, but seems reluctant to flower.

GOODENIACEAE.

VELLEIA PROSTRATA, n. sp.

Wycliffe Well, June, 1924, A.J.E.

A small prostrate herb arising from a short thick root-stock, with slender straggling branches up to 18 inches in length, or even more. Leaves opposite, lanceolate, narrowing at the base, but without a distinct petiole. At each leaf axil and in the forks of the branches are tufts of whitish hairs. Inflorescence, a loose



Fig. 4—*Eucalyptus gilleni*, n. sp.
1, Adult leaves with double intramarginal vein and axillary fruits; 2, juvenile leaves; 3, fruiting branch, the leaves fallen.



Fig. 5—*Velleia prostrata*, n. sp.

1, Flowering branch with leaves; 2, flower enlarged; 3, the two posterior petals showing frilled appendages and lateral auricles; 4, top of the style with folded indusium.

dichasium, with large, leafy bracts, and one or two flowers in the final forks. Flowers yellow, the calyx of three sepals coherent by their edges for more than two-thirds of their length, and separating as the fruit opens; corolla yellow, the three anterior petals longer than the posterior, the free lobes equal, with fringed bilateral appendages, and projecting beyond the calyx. The two posterior petals are free almost to their bases, the inner edges at the middle have each an auriculate appendage curled around the stigma, the terminal portion has membranous appendages similar to the other petals. Stamens 5, anthers free. Ovary superior, the dissepiment extending more than half way up. Seeds at least 17, small, thick, with a tubercular surface, and a narrow border. Indusium cup-shaped, with prominently hairy lips, closing when the flower opens and folding horseshoe fashion.

The nearest affinity is *V. perfoliata*, but the posterior petals are winged on both sides and the bracts are barely connate.

**Additions or new localities from the Tate Herbarium,
Adelaide, University.**

The following are not given in the Flora of the Northern Territory, Ewart and Davies, or in the Horn Expedition Botany, R. Tate, 1896. The collector is R. Tate, if no name is given.

MONOCOTYLEDONEAE.

GRAMINEAE.

Eriachne obtusa R.Br.

Newcastle Waters and Fitzroy River, Calvert Exp., 1894.

Astrebla pectinata F.v.M.

Swallow Creek, 1894.

A. triticoides, F.v.M. var. *lappacea*.

Newcastle Waters.

Chloris barbata Sw.

Tennant's Creek and Barrow Creek, 1894.

Cynodon tenellus R.Br.

Fitzroy River, Calvert Exp., 1897.

Andropogon intermedius, R.Br.

Finke River, at Crown Point, 1894.

Perotis latifolia Ait. (*P. rara* R.Br.).

Newcastle Waters, Tennant's Creek, Barrow Creek, 1894; also Rev. Kempe, Finke River, 1882. This genus is given in Engler's Pflanzenfamilien as from the Old World tropics, and in the Kew Index from India, East Africa, Japan and Cuba.

Imperata arundinacea Cyr.

Illamurta Marsh, 1894.

Leptochloa subdigitata Trin.

Horseshoe Bend, 1894.

Elytrophorus articulatus Beauv.

Arnhems Land, F.v.M. This species is given in the Kew Index as from the E. Indies, and by Engler as from the whole of the Old World tropics.

Diplachne fusca Beauv.

Glen Helen Gorge, Finke River, 1894.

Eragrostis diandra Steud.

Pine Creek and Barrow Creek.

E. Dielsii Pilger.

Goyder River, 1894. (This was under the name of *E. falcata* Gaud.)

E. laniflora Benth.

Bagato Creek, R. Tate, 1894.

Anthistiria membranacea Lindl.

Swallow Creek, Central Australia, 1894.

Panicum argenteum R.Br.

Near MacDonnell Ranges, Rev. W. F. Schwartz, 1889 (ex Nat. Herb. Melb.).

P. reversum F.v.M.

Finke River, at Crown Point, 1894.

JUNCAGINACEAE.

Triglochin centrocarpum Hook.

Victoria Springs, Upper Arkaringa Valley, and Mt. Ilbillie, R. Helms, 1891, and Deering Creek, R. Tate (as *T. calcitrapa* Hook.).

NAJADACEAE.

Najas major All.

Palm Creek and Ilara Water, 1894.

CYPERACEAE.

Schoenus hexandrus F.v.M. and Tate.

Vict. Desert, Camp 57, 1891, R. Helms.

Cyperus alterniflorus R.Br. (labelled *C. fulvus* by Tate).

Finke River, at Horseshoe Bend; Glen Helen, 1894. It is doubtful whether *C. fulvus* occurs in the Northern Territory; the nearest recorded locality is one from Charlotte Waters, collected by Giles.

Scirpus lacustris L. (labelled *S. littoralis*).

Ilara Water, 1894.

S. supinus L.

Deering Creek, Central Australia, 1894.

Eleocharis acuta R.Br.

Deering Creek, 1894.

COMMELINACEAE.

Commelina agrostophylla F.v.M.

Pine Creek.

C. ensifolia R.Br.

Barrow Creek.

ORCHIDACEAE.

Dendrobium Foelschei F.v.M. (*D. canaliculatum* R.Br. var.
Foelschei.)

Near Port Darwin, P. Foelsche, 1882.